

ABSTRACT

Even when a reaction gas flows into a gap formed between a gasket and a membrane electrode assembly, the flowing of the reaction gas to the outside without flowing through an electrode is prevented and thus a decrease in power generation efficiency is prevented. In order to allow the water vapor contained in the reaction gas that flows into an anode-side gap 10a formed between an anode-side gasket 9a and a membrane electrode assembly 5 to condense in at least a part of the gap 10a, and to allow the condensed water to fill the gap 10a, the upstream portion of a cooling fluid channel 8a of an anode-side separator 6a is formed such that it includes a region corresponding to the gap 10a, and the upstream portion is formed such that it includes a region corresponding to a middle stream portion and subsequent portion of a fuel gas channel 7a.